Educate an Orphan

DATACAMP SCHOLARSHIP PROGRAMME

03

FUTURE OF WORK 2027 · STUDENT CURRICULUM HANDBOOK

TRACK 3 OF 6

AI-augmented *Data Engineering*

40 weeks

30 Nov 2026 to 25 Sep 2027

9 hours a week

Study Monday to Friday, live session on Saturday

Certification

DataCamp Data Engineer Associate

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Your forty weeks, *at a glance*

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SECTION 01

Welcome

You will learn to design databases, move data reliably from where it lives to where it is needed, and build pipelines that run on a schedule without you.

THE ROLE THIS TRACK PREPARES YOU FOR

Junior data engineer or analytics engineer.

By the end you will be able to

- Design relational schemas and explain how data warehouses work
- Ingest data from files and APIs with Python
- Build tested, version-controlled ETL and ELT pipelines
- Schedule pipelines with Apache Airflow and package them with Docker
- Use an AI coding assistant and review every line it writes

At a glance

LENGTH	40 teaching weeks plus 3 flex weeks, 30 Nov 2026 to 25 Sep 2027
WEEKLY COMMITMENT	About 9 hours: five study days, Monday to Friday, and a one-hour live session every Saturday
LEARNING PLATFORM	DataCamp, with access provided through the DataCamp Donates programme
BUILT ON	DataCamp's Associate Data Engineer in SQL (30 hours) and Data Engineer in Python (40 hours) career tracks.
CERTIFICATION	DataCamp Data Engineer Associate
COST TO YOU	None for the programme or for DataCamp's own certifications
WHAT YOU NEED	A laptop, steady internet, a GitHub account and a LinkedIn profile

> **NOTE**
> Completing this programme makes you job ready by the standard on the last page. It is not a promise of a job.

SECTION 02

How the programme works

Everyone takes the same 12-week foundation, then 18 weeks in their track, then 10 weeks on a capstone project, certification and the job search.

1

Foundation

Weeks 1 to 12
30 Nov 2026 to 27 Feb 2027

YOU LEAVE WITH

AI Fundamentals certification, working SQL and Python, two mini-projects on GitHub

2

AI-augmented Data Engineering

Weeks 13 to 30
8 Mar 2027 to 10 Jul 2027

YOU LEAVE WITH

All track courses completed and three published portfolio pieces

3

Capstone and job launch

Weeks 31 to 40
19 Jul 2027 to 25 Sep 2027

YOU LEAVE WITH

Your certification, a capstone used by a real person, and an interview-ready profile

Your week

LEARN

Monday to Wednesday

100 minutes a day

The week's DataCamp courses, split across three sessions

BUILD

Thursday

2 hours

A guided project, a DataLab notebook or portfolio work

REVIEW

Friday

1 hour

DataCamp Practice, your weekly log, and one public post about what you built or learned

LIVE

Saturday

1 hour

Live session with your track: code-alongs, demos and peer review

NOTE

Add 10 minutes of DataCamp Practice on every study day. In phase 3 the week changes to capstone work on Monday, Tuesday and Thursday, exam preparation on Wednesday and job search on Friday.

The AI method

You will use an AI assistant on every task, and you will be assessed on whether you can check, correct and explain what it produced. Follow four steps every time.

1. **Attempt.** Spend 10 minutes on the problem yourself first.
2. **Ask.** Ask the assistant to explain its approach, not only to give the answer.
3. **Verify.** Run the result against a case where you already know the right answer.
4. **Log.** Note what the AI produced, what was wrong and what you changed. This AI log goes into every portfolio piece.

How you stay on track

- You keep your own copy of the Day-by-Day Learner Plan and tick each task on the day you finish it.
- Your facilitator and your accountability partner can see your plan. Your facilitator reads the weekly totals every Saturday.
- Two weeks marked Behind in a row means a check-in call. The three flex weeks exist so that one hard month does not end your programme.
- You may change track until the end of week 15. After that the hours no longer fit.

PHASE 1 · WEEKS 1–12

Foundation

The foundation covers what every one of the six tracks needs: AI literacy, SQL, Python, version control and clear communication. You choose your track at the week 12 gate.

WEEK	WEEK OF	DATACAMP COURSES	BUILD (THURSDAY)	CHECKPOINT
1	30 Nov 2026	**Introduction to AI for Work** **Understanding Machine Learning**	Open DataLab and make your first notebook: ask the AI assistant three questions about a small dataset and fact-check each answer.	First public post: who you are and what you want from the programme.
2	7 Dec 2026	**Large Language Models (LLMs) Concepts** **Generative AI Concepts** **AI Ethics**	Write a one-page AI use policy for yourself: when you will use AI, how you will check it, what you will never paste into it.	AI Fundamentals track complete.
3	14 Dec 2026	**AI Fundamentals certification** **Introduction to SQL** **Intermediate SQL (start)**	Query the practice database in DataLab: write ten queries of your own and save them.	AI Fundamentals certification sat.
4	28 Dec 2026	**Intermediate SQL (finish)**	Answer five business questions in SQL in DataLab. Attempt each for 10 minutes before asking the AI assistant.	
5	4 Jan 2027	**Joining Data in SQL**	Guided project: Analyzing Students' Mental Health. Finish it, then add one question of your own.	
6	11 Jan 2027	**Consolidation week: no new courses**	Mini-project 1: write up your findings and publish the notebook on DataLab.	Mini-project 1 published.
7	18 Jan 2027	**Introduction to Python**	Rewrite two of your SQL answers in Python in DataLab.	
8	25 Jan 2027	**Intermediate Python**	Guided project: Investigating Netflix Movies. Finish it, then add one question of your own.	
9	1 Feb 2027	**Data Manipulation with pandas**	Guided project: Exploring NYC Public School Test Result Scores.	
10	8 Feb 2027	**Introduction to Git** **Understanding Cloud Computing**	Create a GitHub repository. Move all your work so far into it with a README.	GitHub profile live.
11	15 Feb 2027	**Data Communication Concepts** **Claude 101**	Mini-project 2: answer one question using SQL, Python and an AI assistant. Keep an AI log of what it produced, what was wrong and what you changed.	Record a three-minute presentation of mini-project 2.

PHASE 1 · WEEKS 1–12 · FOUNDATION *continued*

WEEK	WEEK OF	DATACAMP COURSES	BUILD (THURSDAY)	CHECKPOINT
12	22 Feb 2027	**Gate week: skill assessments retaken**	Polish mini-project 2 and push it to GitHub. Read about the six tracks and shortlist two.	Foundation gate. Submit your track choice.

The foundation gate

You move into your track when you have:

- Completed all 15 foundation courses and the 3 guided projects
- Passed the AI Fundamentals certification
- Published both mini-projects, with an AI log on the second
- Retaken the SQL and Python skill assessments and improved on your starting score

> **NOTE**
> Flex weeks with no tasks fall on the weeks of 21 Dec 2026, 1 Mar 2027 and 12 Jul 2027. Use them to rest or catch up.

PHASE 2 · WEEKS 13–30

AI-augmented Data Engineering

This phase is built on DataCamp's Associate Data Engineer in SQL (30 hours) and Data Engineer in Python (40 hours) career tracks.

WEEK	WEEK OF	DATACAMP COURSES	BUILD (THURSDAY)	SATURDAY LIVE SESSION
13	8 Mar 2027	**Understanding Data Engineering** **Introduction to Relational Databases in SQL**	Map the data of a real small organisation: what records exist, where they live and in what format.	Group code-along on data modelling and warehousing
14	15 Mar 2027	**Introduction to Relational Databases in SQL** **Database Design**	Design tables and keys for that organisation's records and draw the schema.	Show and tell: demo your build; peer review in pairs
15	22 Mar 2027	**Database Design** **Data Warehousing Concepts**	Guided project: Exploring London's Travel Network.	Group code-along on data modelling and warehousing
16	29 Mar 2027	**Data Warehousing Concepts** **Introduction to Snowflake SQL**	Portfolio piece 1: build the database and load sample data.	Show and tell: demo your build; peer review in pairs
17	5 Apr 2027	**Introduction to Snowflake SQL** **Understanding Data Visualization**	Portfolio piece 1: document the schema and your design choices. Publish on GitHub.	Group code-along on data modelling and warehousing
18	12 Apr 2027	**Introduction to Importing Data in Python**	Write a script that reads a CSV and an Excel file into pandas and reports the problems it finds.	Show and tell: demo your build; peer review in pairs
19	19 Apr 2027	**Intermediate Importing Data in Python** **Introduction to APIs in Python**	Pull data from one public API and save it to a file.	Group code-along on data ingestion in Python
20	26 Apr 2027	**Introduction to APIs in Python** **Cleaning Data in Python**	Guided project: Cleaning Bank Marketing Campaign Data.	Show and tell: demo your build; peer review in pairs
21	3 May 2027	**Cleaning Data in Python**	Load your API data into a database table. Make reruns safe: no duplicate rows.	Mid-track review: portfolio demos and one-to-one check-ins
22	10 May 2027	**Streamlined Data Ingestion with pandas**	Schedule your API-to-database script to run daily and log each run.	Show and tell: demo your build; peer review in pairs

PHASE 2 · WEEKS 13–30 · AI-AUGMENTED DATA ENGINEERING *continued*

WEEK	WEEK OF	DATACAMP COURSES	BUILD (THURSDAY)	SATURDAY LIVE SESSION
23	17 May 2027	**Writing Efficient Python Code**	Profile your script, make the slowest step faster and record the gain.	Group code-along on engineering practice and pipelines
24	24 May 2027	**Intermediate Git**	Guided project: Performing a Code Review.	Show and tell: demo your build; peer review in pairs
25	31 May 2027	**Software Engineering Principles in Python**	Add tests and a README to your pipeline. Open a pull request for a peer to review.	Group code-along on engineering practice and pipelines
26	7 Jun 2027	**ETL and ELT in Python**	Guided project: Building a Retail Data Pipeline.	Show and tell: demo your build; peer review in pairs
27	14 Jun 2027	**Introduction to Apache Airflow in Python**	Portfolio piece 2: an end-to-end pipeline as an Airflow DAG, with tests. Publish.	Group code-along on engineering practice and pipelines
28	21 Jun 2027	**Introduction to Docker**	Put your pipeline in a Docker container so it runs with one command.	Show and tell: demo your build; peer review in pairs
29	28 Jun 2027	**Claude Code 101**	Portfolio piece 3: add one feature using an AI coding assistant. Review every line.	Group code-along on containers and AI-assisted engineering
30	5 Jul 2027	**Software Development with Claude Code**	Portfolio piece 3: publish with your AI log. Update your GitHub README to show all three pieces.	Track showcase: your three portfolio pieces, and capstone ideas

SECTION 05

Your portfolio, capstone and certification

Employers will judge you on what you can show. By week 30 you will have three published pieces of work, and by week 37 a capstone used by a real person.

Three portfolio pieces

1. A designed and documented database for a real small organisation's records
2. An end-to-end data pipeline with tests
3. The same pipeline in a container, with a feature added using an AI coding assistant

> **NOTE**
> Each piece is published on GitHub, and on DataLab where it is a notebook, with a README and your AI log.

Capstone

A scheduled pipeline that moves a real organisation's data from where it lives now, such as spreadsheets or exports, into a clean store that can be queried, with data quality checks and a one-page runbook.

Certification DataCamp Data Engineer Associate

This certification is included in your DataCamp access at no cost. It is assessed through timed exams followed by a practical exam, inside a fixed window once you begin, so start only when your facilitator agrees you are ready.

Your certification window is weeks 34 to 37, 9 Aug 2027 to 4 Sep 2027.

If you finish early

The SQL Associate certification at week 17, and DataCamp's Databricks or Snowflake data engineer tracks.

Free resources beyond DataCamp

- The DataTalks.Club Data Engineering Zoomcamp, free and self-paced
- dbt Learn and Astronomer Academy, free courses on dbt and Airflow
- The BigQuery sandbox, a cloud data warehouse that needs no payment card

PHASE 3 · WEEKS 31–40

Capstone, certification and job launch

The last ten weeks turn finished courses into proof: one real project, one certification, and a profile an employer can check in five minutes.

WEEK	WEEK OF	CAPSTONE	EXAM PREPARATION AND JOB SEARCH	SATURDAY LIVE SESSION
31	19 Jul 2027	Find your capstone user and agree the problem with them. Write the one-page proposal: the user, the problem, the data, the success measure. Submit the proposal. Revise it after facilitator feedback.	Retake your track's skill assessments and list your three weakest areas. List 30 target employers and roles.	Capstone proposals: two-minute pitches and feedback
32	26 Jul 2027	Capstone build: get the data or inputs and make a rough first version. Capstone build: a first version that works end to end. Show the first version to your user and write down their feedback.	Revise weakest area 1 with Practice and course review. Draft your one-page CV.	Capstone first-version demos
33	2 Aug 2027	Capstone build: act on the user's feedback. Capstone build: add your AI log and tests or checks. Second check-in with your user.	Revise weakest areas 2 and 3. Finish any certification-track course still outstanding. Have your accountability partner review your CV, then fix it.	Certification briefing: exam format, timing and common pitfalls
34	9 Aug 2027	Capstone build: second version. Capstone build: second version, continued. Test the capstone with the user in their real setting.	Start your certification: first timed exam. Rewrite your LinkedIn headline and About section around your portfolio.	Capstone progress demos and exam experiences
35	16 Aug 2027	Capstone: fix what the user test showed. Capstone: write the README or user guide. Capstone: measure the result against your success measure.	Certification: next exam. Pin your best three repositories and tidy your GitHub profile.	Portfolio review in pairs
36	23 Aug 2027	Capstone: finishing work. Capstone: prepare the handover. Dry-run your five-minute demo with a partner.	Certification: practical exam. Write a reusable cover note and a 60-second introduction of yourself.	Demo rehearsal: five-minute capstone demos, round 1
37	30 Aug 2027	Capstone: ship it and hand it over to your user. Record your five-minute demo. Publish the capstone repository and demo link.	Certification: resit if needed, or finish outstanding exams. Peer review of CV, LinkedIn and GitHub.	Capstone shipped: demos, round 2
38	6 Sep 2027	Write the capstone write-up: problem, approach, result, what you would do next. Publish the write-up. Polish all four portfolio pieces.	Certification: last resit window. Otherwise practise interview questions for your track. Send your first 5 tailored applications. Send 5 more tailored applications (10 in total).	Mock interview briefing and practice pairs
39	13 Sep 2027	Check your capstone user is still using it. Fix one thing.	Technical mock interview: a 45-minute task, then explain every line. Behavioural mock interview. Write up the feedback you received. Redo the weakest part of your mock interviews. Send 5 more tailored applications (15 in total).	Mock interview debrief and demo day run-through
40	20 Sep 2027	Prepare for demo day: slides or a live demo.	Send 5 more tailored applications (20 in total). Complete the graduation checklist on the last page. Follow up on earlier applications. Plan your next 30 days. Final weekly log: what you built and what you can do now.	Demo day and graduation

SECTION 07

Graduation standard

You graduate when all six are true.

1. You have passed the certification named for your track.
2. You have published four pieces of work on GitHub and DataLab: three portfolio pieces and one capstone.
3. You have shipped your capstone to a real user or organisation and recorded a five-minute demo.
4. You have passed two mock interviews: one technical, one behavioural.
5. Your CV, LinkedIn and GitHub profile have been reviewed, and you have sent 20 tailored applications.
6. You have completed a live task with an AI assistant and explained every line of the result, including what the AI got wrong.

Key dates

By 29 Nov 2026	Onboarding: licence active, baseline assessments taken, accounts set up
30 Nov 2026	Week 1 begins
5 Dec 2026	First Saturday live session
Week of 14 Dec 2026	AI Fundamentals certification
27 Feb 2027	Foundation gate and track choice
8 Mar 2027	Your track begins
8 May 2027	Mid-track review
10 Jul 2027	Track showcase: three portfolio pieces published
9 Aug 2027 to 4 Sep 2027	Certification window
4 Sep 2027	Capstone shipped
25 Sep 2027	**Demo day and graduation**



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